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Subject: [redacted] E-2 Units

Dear Sir:

We are pleased to submit the following quotation to cover the subject equipments:

1000 - [redacted]-2 units complete with equipment spare parts. as per Specification No. 50-A-1008-A dated June 1, 1950, Test Specification dated October 11, 1950, and the conclusions reached as the result of certain tests conducted by U.S.N.S. engineers on sample [redacted]-2 unit, Serial No. 3709. A report of our conclusions and copy of test results are attached. It should be noted that due to lack of time no temperature or humidity tests were conducted.

Unit Price $360.50, Total $360,500.00

Estimated tooling- Unit Price $ 14.50, Total 14,500.00

We have adequate test equipment to support a production rate of 50 units per month. If a production rate of 150 per month is required the purchase of additional test equipment in the amount of $3,210.00 will be necessary. This equipment consists of the following items:

3 - Measurements Corp. No. 65B Signal Generators
3 - General Radio Type 583-A Output Power Meters

It is requested that, if required, the purchase of the additional test equipment be authorized as a sum properly chargeable to the contract. The title to this equipment would be vested in the Government. After completion of the contract this equipment would be returned as Government Furnished Property or, if agreeable, negotiations can be conducted leading to their acquisition by U.S.N.F.O. through equitable price adjustment.

Units to be packed for commercial shipment.
Connecticut, Maryland.
Production delivery to start within 270 days
[illegible] production subject to discussion and agreement.

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Inspection: Our plant, Silver Spring, Maryland.

Terms: 1/2 per cent 10 days, net 30 days.

It is requested that a progress payment clause be made a part of any contract resulting from this negotiation.

Yours very truly,

[redacted] 25X1

President.

[redacted]Jr:vpd
Encls.

CONTRACTS
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1. Two specifications have been turned over to us for our guidance: a) Manufacturing Specification No. 50-A-1003-A dated 1 June 1950, and Test Specification dated 11 October 1950. It is our understanding that the performance requirements stipulated in the Test Specification dated 11 October 1950 supercede those in the Manufacturing Specification dated 1 June 1950. This is important because certain of the requirements originally set forth in the earlier specification have been relaxed to a certain degree in the later specification.

2. A test run was made on sample RR-2, Serial No. 3709, this test being as complete as possible without disassembly of the unit. Two copies of the test results are enclosed herswith. The sample was well within requirements, with the following exceptions:

a. The receiver exceeds the 5 mw noise output limit on part of the low band. Inasmuch as this noise is due to excellent sensitivity, we do not consider this to be a defect. We suggest that this requirement of the test specification be reworded to permit backing off the gain control to bring noise within limits, while still maintaining sensitivity within specification limits.

b. In the spurious response check a minimum rejection ratio of 80 db is required. The receiver fell below this requirement at one check point only, and by only 0.9 db. This test is not included in the Test Specification dated 11 October, 1950. We therefore do not know if it still applies. If so, we propose that the minimum rejection ratio be revised moderately to conform with production experience, should we be awarded a contract.

c. The sample did not meet the cross-signal distortion limits called for in Specification 50-A-1003-A, on four out of the six frequencies checked. This test also is not included in the Test Specification dated 11 October, 1950. If the requirement still applies, we propose that it be revised to conform with production experience, should we be awarded a contract.

d. A check was made on crystal H. F. O. operation. With the particular crystal used, the sample unit did not have the required sensitivity on the 3rd harmonic at 4.5 MC. However, inasmuch as the activity of the crystal may not have been average, this check is not conclusive.

d. Conclusion: Since the model in general performs in a manner well above minimum requirements, we expect that any minor discrepancies in performance such as those noted above, can be taken care of by revisions to the specifications without resulting in an inferior product. It is our intention to follow the construction and circuitry of the model in all details, to provide high quality workmanship, proper techniques, and careful alignment. If having done so we still run into minour problems in performance, attributable to design limitations or tolerances, we expect that you will make such adustments to the specifications as might be necessary.

3. Certain information not available to us in the drawings provided for bid purposes would be needed to insure exact duplication of components, in the event that we are awarded a contract.

a) The latest information on layout of the tuning dial markings in the event that the tabular information on drawing 1005-68-1, 2 & 3 is not current.

b) Winding data on coils and transformer windings.

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April 23, 1952

TEST ON RR-2 SAMPLE, SERIAL #3709

Dial Cal. is within spec. (Test Spec & Procedure, 11 Oct. 1950)

Receiver exceeds 5 mw output on noise on part of low band. This is contrary to spec. (Test Spec & Procedure, 11 Oct. 1950, Section 4.2.6)

Sensitivity measurements are as follows. All are within spec. (Test Spec & Procedure, 11 Oct. 1950, Section 3.2.4) which allows 5 uv max.

Band 1		Band 2		Band 3	
Freq. MC	Sens. uv	Freq. MC	Sens. uv	Freq. MC	Sens. uv
3	1.65	6	.83	12	1.27
3.2	1.8	6.4	.78	12.8	1.4
3.5	2.0	7	.77	14	1.25
3.8	1.7	7.6	.72	15.2	1.17
4.1	1.7	8.2	.79	16.4	1.24
4.4	1.65	8.8	.75	17.6	1.20
4.8	1.55	9.6	.74	19.2	1.17
5.1	1.45	10.2	.73	20.4	1.16
5.5	1.37	11	.73	22	1.26
5.8	1.37	11.6	.64	23.2	1.2
6	1.37	12	.62	24	1.14

Band 1 sens. measurements above made at less than full gain. Gain set for 3.15 v output on noise.

IMAGE RATIOS: Test Spec & Procedure, 11 Oct. 1950, requires 30 db min.

Band 1	6 MC	3/4 gain approx.	405:1	52.2 db
		1/2 gain approx.	365:1	51.2 db
Band 2	12 MC	Full gain	69.2:1	36 db
		1/2 gain approx.	39.7:1	32 db
Band 3	24 MC	Full gain	37.8:1	31.5 db
		1/2 gain approx.	44.7:1	33 db

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SECURITY INFORMATION

SPURIOUS RESPONSES. Spec #50-A-1003-A requires 80 db min.

Receiver Freq. MC	Band	Signal Gen. Approx. Freq. MC	Rejection Ratio	Rejection DB	Gain Full
12	3	25.5	$3.82:10^5$	118	Full
12	3	24.5	$1.27:10^5$	102	"
14	3	28.5	$4.22:10^4$	92.6	"
14	3	29.5	$1.56:10^5$	83.9	"
6	2	12.5	$2.71:10^4$	88.7	"
6	2	13.5	$5.03:10^4$	94.0	"
9	2	19.5	$3.14:10^4$	90.0	"
9	2	18.5	$1.40:10^4$	82.9	"
12	2	25.5	$2.62:10^4$	88.3	"
12	2	24.5	$7.15:10^3$	79.1	"
3	1	6.5	$6.19:10^4$	95.9	"
3	1	7.5	$8.93:10^4$	99.0	"
4.5	1	9.5	$1.75:10^4$	84.8	Reduced Gain for IV Noise Output
4.5	1	10.5	$4.35:10^4$	92.9	" " "
6	1	12.5	$1.41:10^4$	83.0	" " "
6	1	13.5	$2.29:10^4$	87.2	" " "

CROSS SIGNAL DISTORTION. Generators fed through 510 ohm resistors, 200,000 uv output. Spec #50-A-1003-A requires 100 db min. Single gen. fed through 270 ohm resistor.

Receiver Freq. MC	Band	Sig. Gen. "A" Approx. Freq. MC	Sig. Gen. "B" Approx. Freq. MC	Equiv. Input at Rec. Freq.	Ratio	Db
6	1	4.5	1.5	.6 uv	167,000:1	104.3
3	1	4.5	1.5	.4 uv	250,000:1	107.9
12	2	9	3	2 uv	50,000:1	94.0
6	2	9	3	1.4 uv	71,500:1	97.1
24	3	18	6	3.2 uv	31,200:1	90.0
12	3	18	6	3.3 uv	30,300:1	89.7

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CRYSTAL H.F.O. OPERATION. Test Spec & Procedure, 11 Oct. 1950, requires max. 5 uv Fund. and 2nd har. and 7.5 uv, 3rd har.

Band	Xtal Freq. MC	Harmonic	Sens. uv
1	2.5	2nd	1.5
2	2.5	3rd	4.2
1	4.5	1st	1.64
2	4.5	2nd	1.14
3	4.5	3rd	8.4
2	9	1st	.79
3	9	2nd	1.16

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